

WHAT IS CLAIMED IS:

1. A semiconductor substrate having a notch in an edge portion thereof,
the notch having two shoulder portions each configured as an arc and a difference
in curvature between the two shoulder portions being not less than 0 mm and not more than
5 0.1 mm.

2. The semiconductor substrate of claim 1, wherein each of the two shoulder
portions has a curvature not less than 0.3 mm.

3. The semiconductor substrate of claim 1, wherein the notch has a bottom portion
configured as an arc and the bottom portion has a curvature not less than 1 mm.

10 4. The semiconductor substrate of claim 3, wherein the notch has two wall
surfaces each mirror-finished and forming an angle not less than 89° and not more than 95°
therebetween.

5. A method for fabricating a semiconductor device using a semiconductor
substrate as recited in claim 1, the method comprising the steps of:

15 burying an insulating film or a conductive film in a depressed portion provided in
the semiconductor substrate; and

planarizing the insulating film or the conductive film by chemical mechanical
polishing.

20 6. A method for fabricating a semiconductor device using a semiconductor
substrate as recited in claim 1, the method comprising the steps of:

forming an end-point detection film on the semiconductor substrate;

performing etching with respect to the end-point detection film and the
semiconductor substrate by using a mask pattern to form an isolation trench;

burying an insulating film in the isolation trench; and

25 planarizing the insulating film by chemical mechanical polishing.

7. The method of claim 6, wherein a polishing speed for the insulating film is double or more a polishing speed for the end-point detection film in the step of planarizing the insulating film.

8. The method of claim 6, further comprising, after the step of planarizing the
5 insulating film, the step of:

polishing the end-point detection film by chemical mechanical polishing.

9. A method for fabricating a semiconductor substrate having a notch in an edge portion thereof, the method comprising the step of:

a processing step of mirror-polishing the edge portion, the processing step
10 including the step of shaping each of two shoulder portions of the notch into an arc and adjusting a difference in curvature between the two shoulder portions to a value not less than 0 mm and not more than 0. 1 mm.

10. The method of claim 9, wherein the processing step includes the step of adjusting the curvature of each of the two shoulder portions to 0. 3 mm or more.

15 11. The method of claim 9, wherein the processing step includes the step of shaping a bottom portion of the notch into an arc and adjusting a curvature of the bottom portion to 1 mm or more.

12. The method of claim 11, wherein the processing step includes the step of mirror-finishing two wall surfaces of the notch to form an angle not less than 89° and not
20 more than 95° therebetween.